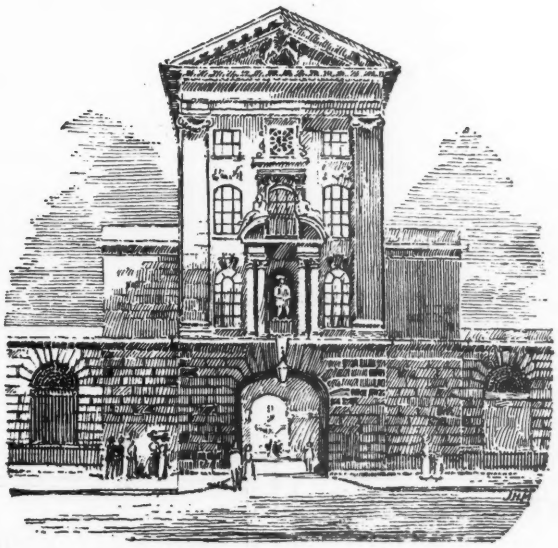
ST. BARTHOLOMEW'S HOSPITAL JOURNAL



VOL. XXXVI.—No. 8. MAY, 1929. [PRICE NINEPENCE.

CONTENTS.

INDEX TO ADVERTISEMENTS.

St. Bartholomew's Hospital

"Æquam memento rebus in arduis
Servare mentem."
—*Horace*, Book ii, Ode iii.

JOURNAL.

VOL. XXXVI.—No. 8.] MAY 1ST, 1929. PRICE NINEPENCE.

CALENDAR.

Wed., May 1.—Surgery: Clinical Lecture by Sir Holburt Waring.
Cricket Match *v.* Wanderers' C.C. Home.
Fri., „ 3.—Dr. Langdon Brown and Mr. Harold Wilson on duty.
Medicine: Clinical Lecture by Sir Thomas Horder.
Sat., „ 4.—Cricket Match *v.* Southgate. Home.
Mon., „ 6.—Special Subject: Clinical Lecture by Mr. Scott.
Tues., „ 7.—Prof. Fraser and Prof. Gask on duty.
Wed., „ 8.—Surgery: Clinical Lecture by Sir Holburt Waring.
View Day.
Fri., „ 10.—Dr. Morley Fletcher and Sir Holburt Waring on duty.
Medicine: Clinical Lecture by Dr. Morley Fletcher.
Sat., „ 11.—Cricket Match *v.* Hampstead. Home.
Mon., „ 13.—Special Subject: Clinical Lecture by Dr. Cumberbatch.
Tues., „ 14.—Sir Percival Hartley and Mr. L. B. Rawling on duty.
Wed., „ 15.—Surgery: Clinical Lecture by Mr. Harold Wilson.
Cricket Match *v.* Stoics. Home.
Fri., „ 17.—Sir Thomas Horder and Sir C. Gordon-Watson on duty.
Medicine: Clinical Lecture by Sir Thomas Horder.
Sat., „ 18.—Cricket Match *v.* Winchmore Hill. Home.
Sun., „ 19.—Whit-Sunday.
Mon., „ 20.—**Bank Holiday.**
Cricket Match *v.* Croydon. Home.
Tues., „ 21. Dr. Langdon Brown and Mr. Harold Wilson on duty.
Wed., „ 22.—Surgery: Clinical Lecture by Sir Charles Gordon-Watson.
Annual Athletic Sports at Winchmore Hill.
Boat Races for the Inter-Hospital Cups on the course from Hammersmith Bridge to Putney Bridge.
Thurs., „ 23.—Cricket Match *v.* M.C.C. Home.
Fri., „ 24.—Prof. Fraser and Prof. Gask on duty.
Medicine: Clinical Lecture by Dr. Langdon Brown.
Sat., „ 25.—Cricket Match *v.* Metropolitan Police. Home.
Mon., „ 27.—Special Subject: Clinical Lecture by Mr. Just.
Tues., „ 28.—Dr. Morley Fletcher and Sir Holburt Waring on duty.
Wed., „ 29.—Surgery: Clinical Lecture by Sir Charles Gordon-Watson.
Cricket Cup Tie *v.* Middlesex Hospital.
Athletic Sports Match *v.* St. Thomas's Hospital.
Fri., „ 31.—Sir Percival Hartley and Mr. L. B. Rawling on duty.
Medicine: Clinical Lecture by Dr. Morley Fletcher.

EDITORIAL.

ONE of the great figures in the life of the Hospital has left us. Sir Anthony Bowlby died on April 7th, after a short illness. A Memorial Service was held at the Church of St. Bartholomew the Great on April 10th. The King was represented, and there were present all those who had known him in his many capacities.

The present-day students will remember him chiefly as a regular visitor to Surgical Consultations, where he opened the discussion with those dry, concisely expressed opinions that never admitted an ambiguity. But there is a host which will mourn him for qualities monthly consultations could never show.

* * *

Mr. McAdam Eccles has for many years guided the affairs of the JOURNAL as Chairman of the Publication Committee. His retirement from the Chair takes place this month, and it is with great regret that we announce his departure. We hope in our next issue to do justice to the benefits he has conferred upon the JOURNAL in the past.

* * *

Museums are quiet places; nothing ever happens in them unless they are open to the public. And then it is only the puppets of romantic novelists who do startling things against a background of dead specimens. During the last month the Museum, apparently tired of being just passively rearranged, did something on its own. Of some specimens of wood in a case, one was found reduced to an ashen powder, its label slightly charred, and the neighbouring specimens bearing the marks of

its destruction. At first the sun was blamed: its rays must have been focused by a flaw in the glass door. A later authority declared that the substance was not ash; it was fungus. Then a sample was analysed; it contained no potassium, and therefore could never have been part of a living plant. Finally it was remembered that the wood came from Egypt. In the face of the alleged power of the gods of that country and of our ignorance of their exact habits, we hesitate to expose our spiritual nether garments to the risk of being bitten by a Jackal-headed Deity in the after life by making any profane suggestions. We are willing to waive materialism, and we leave it to our Rider Haggards to suggest sinister fates for those who meddle in the matter. "Combustion" did it. If it was spontaneous, we can only express gratified surprise that it should have happened in St. Bartholomew's Hospital.

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At a meeting of the Council of the Royal College of Surgeons on April 11th, it was decided to invite Sir D'Arcy Power to accept the title of Honorary Librarian of the College in recognition of his distinguished position as a bibliographer, and of his work in re-editing Plarr's *Lives of the Fellows*. We would like to offer our heartiest congratulations to Sir D'Arcy Power on thus becoming the first Honorary Librarian, and to the College on its good fortune in securing his services.

* * *

PAST *v.* PRESENT CRICKET MATCH.

The Past *v.* Present match will take place on Saturday, June 8th. Will those who would care to play communicate with Dr. Geoffrey Bourne, 25, Harley Street, W. 1?

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ST. BARTHOLOMEW'S HOSPITAL WOMEN'S GUILD.

We are very pleased to be able to make the following announcement, to which we wish to draw the attention of our readers:

The Terrell String Quartet (of which the Misses Bowlby are members) has very kindly promised to give us a concert in aid of the Special Reconstruction Fund of the Guild, at the Court House, Marylebone Lane, Oxford Street, on Wednesday, June 12th, at 8.15 p.m.

We feel that it is indeed good of them that in spite of their recent great sorrow they have decided not to disappoint us, but to give their concert as previously arranged.

We hope that many will show their appreciation by obtaining tickets, which will be on sale on View Day.

Our Annual View Day Meeting will be held this year in the Library owing to the Great Hall being in process of re-decoration.

We hope that as many of our members as possible will make a special effort to attend, as we have been very fortunate in securing the Lady Mayoress and Sir Charles Wakefield as our speakers.

A cordial invitation is issued to anyone interested.

The Meeting will commence this year at 4 p.m., so as to allow more time to visit the wards afterwards.

* * *

MEDIGUILDANCES.

A series of dances is being arranged in aid of the Royal Medical Benevolent Fund Guild at the British Medical Association's Hall in their new buildings in Tavistock Square. The second of the series organized by St. Bartholomew's Hospital will be held on Thursday, June 13th, 8.30 to 12.30. Tickets: Single, 6*s.*; double, 11*s.*—including light refreshments and soft drinks—and Bridge Tickets 6*s.* each may be obtained from Miss Dey, The Matron's House, St. Bartholomew's Hospital; Mr. Ivor Philps, St. Bartholomew's Hospital; Mrs. Douglas Harmer, 9, Park Crescent, W. 1; Miss Joy Horder, 141, Harley Street, W. 1.

* * *

Mrs. W. Lovell and Mrs. J. E. H. Roberts, who are in charge of the depot at "Bart.'s" on Alexandra Day, Wednesday, June 12th, will be glad to have the names of any ladies who are willing to sell roses in the district around the Hospital. Names and addresses to be sent to Mrs. J. E. H. Roberts, 18, Montagu Mansions, W. 1. The sum allotted to the Hospital from the Alexandra Rose Day Fund has been increased each year, and last time amounted to £1000. It is hoped that this year there will be again an increase in the amount collected by our depôt. This will only be possible if the number of sellers can be increased.

ACKNOWLEDGMENTS.

The Antiseptic—The British Journal of Nursing—Giornale della Reale Società Italiana d'Igiene—Guy's Hospital Gazette—The Hospital Gazette—Kenya and East Africa Medical Journal—Leprosy Notes—The London Hospital Gazette—Long Island Medical Journal—The Magazine of the Royal Free Hospital—The Medical Journal of Australia—Medical Review—Middlesex Hospital Journal—New Troy—Nursing Times—The Post-Graduate Medical Journal—The Quarryman—Revue de Médecine—St. George's Hospital Gazette—St. Mary's Hospital Gazette—St. Thomas's Hospital Gazette—The Student—The Speculum—University College Hospital Magazine—The University of Toronto Medical Journal.

OBITUARIES.

SIR ANTHONY BOWLBY.

BOWLBY and I were associated in the School from 1882 to 1920. We were almost exactly of an age, but he was two years or so my senior in the School. He was Surgical Registrar when I was demonstrating anatomy, and made a great reputation by his teaching of surgical pathology in the Museum. When I was Medical Registrar he was already

Assistant Surgeon. About 1895 I was appointed on the Staff, and then as Joint Treasurer of the School began to be closely associated with him, and to take an active part in the School policy.

At that time we were in very low water. Our income, as the Dean will remember, was about a quarter of what it is now, and at the same time the preliminary and intermediate sciences were requiring extensions and improvements both in equipment and in personnel. It was an extremely difficult time. But a younger generation was rapidly coming on to the Staff, every one of whom was determined that the interests of the School must be considered before anything else. I cannot recall the details, and I am writing far from London, but I remember that we maintained two principles—first that the junior posts should be better paid, so that service in the School, though always remaining a ground for promotion, should not establish a claim that work had not been requited; and secondly, that members of the Staff should in every possible way improve the teaching of medicine and surgery regardless of labour and private interest.

Bowlby had carrried out this policy even in junior posts, and I remember with great pleasure the cordial sympathy and hearty co-operation which existed among those of us who were of that standing. I should like to mention Tooth especially. A more unselfish colleague than he could not exist. But we were all in the swim, and if the phrase "a band of brothers" could ever be justified in speaking of a hospital staff it was applicable to us younger men then. Most of us, apart from hospital work, were warm personal friends, which made everything easier.

The financial difficulty of providing for the better teaching of the sciences was greatly relieved by a Government grant, given, I think, through the Board of Education. It carried with it as a condition the

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abolition of the old " share " system, and from that time the payment of teachers, both senior and junior, was made on a regular rate, according to the work done.

The next great question that arose was our connection with the University. About 1896, when the Cowper Commission sat, it had been proposed that the preliminary and intermediate sciences should be removed from the School and grouped in one, two or three centres under the University. This had been negatived, and rightly, for I am certain that a medical school loses enormously if it is divorced from the sciences on which pathology and practice rest. The Haldane Commission, about 1910, took a different line, and aimed at the control of the Schools by the University. An attack upon our autonomy was naturally unpopular, and doomed to failure. But a middle path was open. Osler's evidence before the Commission, though failing to give due weight to practical teaching, had rightly criticized the weakness, in comparison with other countries, of our contribution to fresh discovery in medicine and surgery, and the want of attention to, and application of, the results of discovery in the earlier sciences. The best way seemed to us to be to raise the standard of our teaching by obtaining university status for the teachers. This was eventually extended to professorships of medicine and surgery.

Bowlby's sagacity was never more clearly shown than in his adoption of this policy. He had no academic traditions, he knew little of the sciences, and he was throughout a practical man. But he realized the situation, he saw the advantage to the School, and he threw his weight into that scale. I never admired him more than in this.

It was while this question was still in debate that the war broke out, and he and I went out to France. We were both appointed to G.H.Q. and we shared rooms throughout the next four and a half years. Bowlby's great work was the establishment of the clearing stations. These were a formation conceived after the Boer War, and never yet put into practice. Their functions were not laid down precisely, but were left to develop as needed. The stationary condition of the war in France turned them on that front into large hospitals where surgery of the most daring kind was regularly practised. The tradition of the army till then was that wounded men must be at once transferred to the Base, and that there alone could major operations be performed. The dreadful injuries of the Great War upset this. Hundreds of men were brought in daily whose wounds were such that they must have died during transport. Their only chance was immediate operation. Already in the autumn of 1914 Bowlby had realized this, had impressed it on G.H.Q., had devised the equipment necessary for the installation of first-rate operating theatres, and was obtaining these one by one as they could be sent out. Later, this scheme was completed by the organization of the personnel. " Teams " comprising two surgeons, an anæsthetist and a sister were organized, which moved about as the fighting required. They never, of course, replaced the Base. That remained the centre where the great advances were made—the treatment of compound fractures of the thigh for instance, and the conditions, imperfectly understood before, of perforating wounds of the chest. But the immediate surgery at the front was the means of saving thousands of lives, and I shall never forget the impression I received on seeing a surgeon pulling out the successive coils of intestine, and sewing up shrapnel holes as if he was darning a stocking.

Of Bowlby's work at the Red Cross, Sir George Makins gave a good description in the *Times* of April 11th. I knew nothing of it.

Perhaps a word or two of a more personal kind may not be out of place. A more loyal and honourable colleague, a more unselfish and devoted servant of the School never existed. He had a great talent for friendship, and had, I should think, a greater personal connection with old students than any member of the Staff. He and I never differed that I remember in Hospital politics, and we passed four and a half years in close daily association in France in undisturbed friendship. I do not think that we once had a difference. A man of whom one can say that is very uncommon.

WILMOT HERRINGHAM.

I should like to be allowed the very special privilege and honour of adding my mite to the other appreciations of Sir Anthony.

I so well remember the first time I came in contact with him in 1887, at a surgical pathology demonstration, when his clear, concise and convincing method of teaching struck my expanding mind, and has ever been an example to me from which, I fear, I often fell far short.

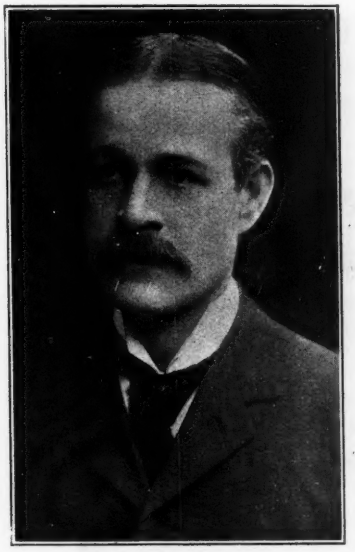
I owe my life to Bowlby, and with many another Bart.'s man whom he has helped with his surgical acumen and ability, would stand with those who are proud to have been his pupils and friends at the glorious old Hospital, with its long history and tradition of surgeons and surgical teaching. May his memory live long, entrenched in the proud affection of his *alma mater !*

W. MCADAM ECCLES.

ALPHONSO ELKIN CUMBERBATCH, M.B.(Lond.), F.R.C.S.(Eng.).

It is with the deepest regret that we have to record the death of our distinguished Consultant, Mr. A. E. Cumberbatch, who succumbed to an attack of pneumonia in his eighty-second year at Great Sarratt Hall, Herts, where he had been living in retirement since 1918.

He was educated at University College School, and obtained the senior scholarship when he joined St. Bartholomew's in 1866. After a brilliant career as a student, during which time he won the Foster Prize and the Kirkes Gold Medal, he became House Surgeon to the late Sir William Savory, having graduated as an M.B.Lond.



By kind permission of the Lancet.

in 1871. Later he passed the F.R.C.S. examination, and for a time was Resident Anæsthetist, until his appointment as Demonstrator of Anatomy in the Medical School. He quickly succeeded in making his lectures and demonstrations attractive to the students and earned a great reputation as a teacher of anatomy.

During this period he became interested in otology, and was given charge of the new Aural Department when it was inaugurated in 1882, in succession to Mr. John Langton, the general surgeon who had previously attended to the ear cases in the Hospital. He was one of the first ear specialists to be appointed in one of the general hospitals of the country and he devoted his time entirely to the treatment of the ear, leaving the nose and throat patients to Lauder Brunton, Butlin and Bowlby successively. For twenty-five years he carried out his work with the help of his friend and assistant, Mr. L. A. Lawrence, retiring in 1907. Although he took a keen interest and helped largely in arranging the details of the new Out-Patient Department, he handed over the charge of it to Mr. C. E. West as soon as it was completed. In 1914, after the outbreak of the war, he again took over a large part of the work, and continued to see out-patients until the Armistice.

Many generations of students derived much benefit from the teaching which they received in his Out-Patient Department in one of the boxes in the old Surgery adjoining Smithfield Market. In spite of poor accommodation he examined there large numbers of patients twice weekly and gave admirable demonstrations to his clerks. His in-patients were admitted to the general surgical wards, as at no time were there any special "Ear" beds or any house surgeon to the Ear Department. As an operator he had a deft hand with a remarkable delicacy of touch. Undoubtedly he did much to advance the surgery of the ear during a period when most of the aural operations were being performed by the general surgeons. Although not a voluminous writer he contributed valuable papers to the *St. Bartholomew's Hospital Reports* and to other periodicals, also contributions to various text-books, such as Walsham's *Surgery* and Heath's *Dictionary of Practical Surgery*. He was one of the founders of the original Otological Society of the United Kingdom, and for some years served as its President. Gifted with such a fine personality and with a knowledge of his speciality possessed by few others of his time, he naturally acquired an extensive private practice with people who had absolute confidence in his advice.

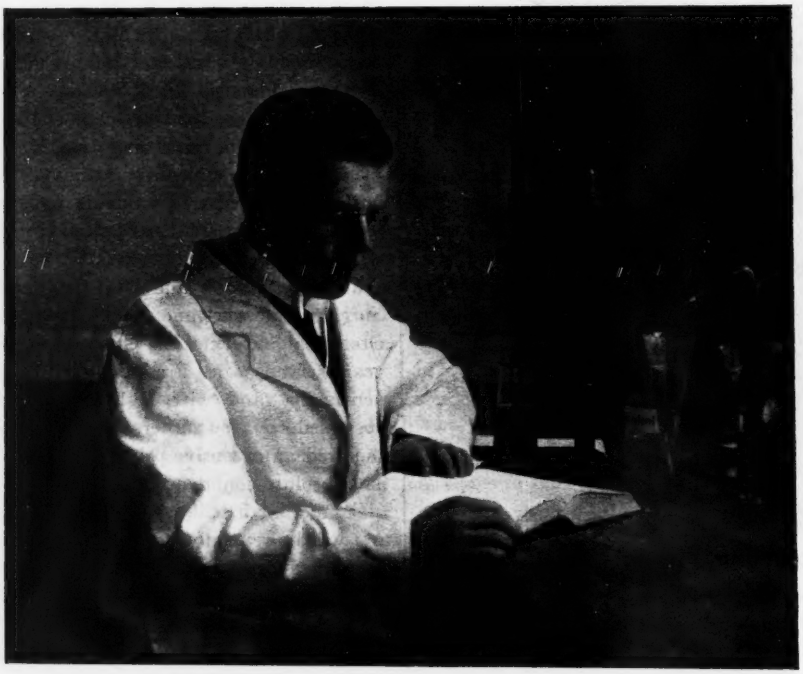
Cumberbatch had a memory of remarkable accuracy, and will be remembered by many of his successors who were fortunate enough to enjoy his friendship as a rare conversationalist. Anyone who had the good fortune to walk with him in the country was rewarded by hearing many interesting comments on nature, many a good story, and always some vigorous criticism of politicians in general, especially of the then Chancellor of the Exchequer. He had a considerable knowledge of literature, of music and of the arts. Thus he was an admirer of Chinese pottery, and possessed one of the finest collections of old china in the world. As a young man he was a keen sportsman, played a good game of lawn tennis, often with Sir Henry Butlin, was for his time an excellent skater, a sound shot and a good billiards player. His love for animals, especially for cats, which were always in his room, was proverbial. Later on he took up golf and had many theories on how it ought to be played. Although never a long hitter, he often managed to defeat his opponent by making an

unexpected approach shot or by his deadly putting with an ordinary driver. In his games, as with his work, he always displayed great ingenuity and was a great sportsman.

To many he was a true friend, always ready to advise, and a companion whose loss will be deeply regretted. Without doubt the Aural Department of the Hospital owes a deep debt to and will long remember its founder.

Mr. Cumberbatch was married in 1881 to Alice Lucy Moffatt, who rendered him much help in his practice and died after forty-one years of married life, leaving three daughters and one son, Mr. Hugh Cumberbatch.

W. D. H.



R. L. MACKENZIE WALLIS, M.A., M.D.

Dr. Robert Lauder Mackenzie Wallis, who died on April 1st, after a short illness, at the early age of 43, graduated B.A. from Downing College, Cambridge, taking a first class in the Natural Sciences Tripos. On leaving Cambridge he was appointed Lecturer in Chemical Physiology at University College, Cardiff. In the autumn of 1911 he came to work in the Laboratory of Chemical Pathology at St. Bartholomew's Hospital, and was appointed Demonstrator in Chemical Pathology in 1912. He succeeded Sir Archibald Garrod as Lecturer in Chemical Pathology in 1919, and in 1925 he was appointed Chemical Pathologist to the Hospital.

In the war he held a commission as Temporary Captain R.A.M.C., and was sent on service to India, where he served on the staff of the 34th General Welsh Hospital at Deolali. From Deolali he was seconded for special service in the Parel Laboratory, Bombay, and at the end of the war, though asked to continue his work for the Government of India, he elected to return to St. Bartholomew's.

Mackenzie Wallis was a tireless worker. No ordinary man could have done the routine laboratory work as he did, and yet find time to pursue research in a wide variety of directions, and always on original lines. But in addition to this he studied clinical medicine; he obtained the diplomas of L.M.S.S.A. in 1913, and in 1919 he graduated M.D.Camb., and was awarded the Horton-Smith Prize for his thesis.

In his laboratory work he will be chiefly remembered for his interest in diseases of the pancreas and in diabetes mellitus. His modification of Folin and Wu's method of blood-sugar estimation is now in routine use in many laboratories. He was the first to show that the glycosuria of pregnancy is of pituitary origin. His idea that sulphæmoglobinæmia is due to the presence in the blood

of reduced hæmoglobin led to his discovery of the nitroso-bacillus. The variety of his knowledge and interest is shown by his papers on kidney disease in pregnancy, on metabolism in the insane, on protein hypersensitivity in the diagnosis and treatment of a special group of epileptics, and by numerous writings on the chemical pathology of gastro-intestinal disease.

His fertile brain was never at a loss for a helpful suggestion in the diagnosis of obscure disease, and many engaged in general practice know the value of his work and advice. He took chemical pathology to the bedside with a genius and versatility that will long be unequalled. And now that he has left us, his friends at the Hospital will always remember his readiness to help them, his courage in difficulties and his devotion to work. He leaves a widow and three children. G. E.

SOME CONTRASTS IN MEDICAL EDUCATION.

An Address delivered to the Abernethian Society on March 7th, 1929.

(*Concluded from p.* 101.)

The schools of Australia are an interesting contrast among themselves, and each is perhaps typical of the city it is situated in—not of the city in the material sense, but of the people and of their activities and cultures. All are of the university type, similar to those of the provincial cities of this country. They have pre-clinical departments directed by professors of the university, staffed by men who look forward to careers in these sciences, and equipped with laboratories sufficient for satisfactory practical work by the students. Unfortunately financial considerations limit the staff to an irreducible minimum, so that teaching occupies too much of their time, and there is little left for the investigations that keep the departments alive and progressive. It is only in recent years that the Australian schools have been producing graduates of their own universities to occupy teaching posts in their pre-clinical departments, and many members of their staffs must still be drawn from the universities at home. This is possibly of value to the departments, bringing in new methods and ideas, but it also handicaps them, as they are not on quite the same level as the departments at home in their choice of staff, since candidates for appointments are not always prepared to accept posts of equal status and emoluments so far from home. This difficulty is gradually correcting itself, and whereas the Australian universities looked a few years ago to the home country to supply their staffs, local men are being appointed in increasing numbers.

Of the pre-clinical departments, those of anatomy stand out strikingly, and in one of the universities there is a department of anatomy that, in my opinion, compares favourably with the anatomy departments throughout the Empire in its activity and its achievements. Anatomy is not a subject of dull dissection and description there, but the staff is engaged in the correlation of structure and function by investigations of fundamental importance, and its influence on the whole medical school is already apparent. Histology is included in the departments of anatomy.

There are not separate departments in bacteriology, bio-chemistry and pharmacology, these subjects being included in the departments of pathology and physiology, but similar defects are to be found in many of the medical schools of this country. On the whole the pre-clinical education is satisfactory and compares well with that found in our provincial universities. The financial stringency is at present apparent, but as the country matures the nation will realize its obligations to university education.

The clinical education at the Australian universities suffers in the same way as at the provincial universities of this country from the difference of outlook of the hospital governing boards and of the universities. The hospitals are, so to speak, lent to the universities, and the educational arrangements and facilities are those that can be obtained with a minimum of bother and expense to the hospital. At one of the Australian universities three hospitals supply the medical school with clinical material for teaching in medicine and surgery. A student may take his courses at any of these and may move from one to another, but in practice this is seldom done, and a student usually obtains all his clinical experience at one of the three. In this way a spirit of rivalry is encouraged, and rivalry is good for progress and efficiency. Each hospital has a Dean, who supervises the studies of the students in the wards of his hospital. There are thus virtually three hospital schools offering education in the clinical subjects. At the same time the university controls the lectures, and the courses in obstetrics and the special subjects. Unfortunately the spirit of rivalry and jealousy between the hospitals extends to the university, which is ultimately responsible for the whole curriculum, and this lack of co-operation between the four bodies does not encourage progress and efficient education. At another of their universities, a hospital situated close to the university with a well-equipped department for clinical pathology is virtually a university hospital, and there is

close co-operation with the university faculty, but it is not sufficiently large for the clinical requirements of all the students, and a number of them do their ward work at a second hospital where the university influence is not so marked.

The clerks and dressers keep university terms as they do in the provincial schools of this country, and so cannot occupy the same responsible position in the work of the hospital as they do here in London. There is no provision for laboratory work in association with the ward work, but that is a fault that is common here also. In Melbourne two of the teaching hospitals have research institutes attached to them, and provided for by private endowments. Excellent work is done in them, and they make up to some extent for the deficiency in ward laboratories and provide opportunities for investigations by the young clinicians of the hospitals. Unfortunately they have no university status, and are of much less value than they could be if they were part of the official educational machinery. The number of resident appointments in the various hospitals utilized for teaching is sufficient at present to enable almost every graduate to obtain such an appointment. These appointments provide a rotation through at least medicine, surgery and a special department in the course of a year, and so give good opportunities for a general experience. They have one serious drawback, however. A resident is never with one ward or firm for more than four months, so that there is little opportunity for him to really settle down as part of a team or to become of such value to his chief as he would if the association was of longer duration. This, I am sure, prevents the work rising above that necessary for taking care of the patients, and prevents the observations and records reaching the level requisite for original investigations in clinical problems. A house-physician, or house-surgeon, can be a very important factor in the investigations of his chief. These resident appointments are allotted as the result of special examinations for the purpose.

When the graduate has completed his house appointments he usually proceeds at once to practise. This is largely because the country needs them, and they can make a living at once. It is unfortunate, as few of the young graduates work in the pre-clinical departments—a form of training that would be of inestimable benefit to the school, not only by strengthening the future clinical teachers, but also by aiding the overworked staffs of the pre-clinical departments.

It would be difficult to find a group of more efficient practical clinicians than the teachers in the clinical departments of the Australian schools. They are well read, they keep in touch with all that is going on in other parts of the world by means of literature and by periodic visits to Europe or America, and set an example of practice of a high order. They are, with certain striking exceptions, rather too busy to devote to teaching that large proportion of their time and of their thoughts and energies that we have learnt to expect of our chiefs.

In general, the medical education of the Australian universities provides an efficient sound training in thoroughly up-to-date practice, but so far it has not produced so much advancement and progress as might be expected from the high level of capacity and attainments of the teaching staffs. The community is still a young one, and time will soon rectify the deficiency.

Of the three principal medical schools, that of Adelaide is the smallest. Perhaps because of this there is a close contact between the student and his seniors. There is a tradition of high general educational attainments in the university and the city, which is seen also in the medical school, and the educational standard is culturally and professionally high, even if financial considerations prevent the technical equipment being of the level expected in modern scientific departments of university standing. The University of Sydney is situated in the largest city of the Commonwealth, and its medical school offers a good efficient education of a strictly utilitarian type. It has received a generous endowment for cancer research, and has recently decided upon the appointment of full-time professors in medicine and surgery. At Melbourne the atmosphere is something between that of cultured Adelaide and utilitarian Sydney—a mean, but not altogether a comfortable mean, for the medical school is striving after a high academic standard in medical science that it cannot at present afford, but which it knows it must soon provide, while maintaining a good all-round practical training, necessary because of the vast primitive country that its graduates must serve. In the last few months the University of Melbourne has decided to appoint a full-time professor of obstetrics.

The medical schools of America present so great a variety of standards in educational value that it is impossible to speak of them collectively. They vary from the worst in the world to something nearly the best. There is little profit in discussing what is merely bad, and I propose briefly to describe some of the features of the good ones. These are important, for they embody the best that money can supply to-day, even though we recognize that money cannot supply all that is to be desired.

In the good schools of the United States it is possible to recognize the influence of German university development. The pre-clinical subjects are dealt with in departments designed for the teaching and development

of sciences. The equipment and laboratory accommodation is lavish. The student performs experiments for himself to a much greater extent than anywhere in the world, he is encouraged to think for himself, the development of present knowledge in some few selected problems is presented to him in full detail so that he sees for himself how knowledge grows, and he receives lectures in large groups to as small an extent as is compatible with the time limits set by the curriculum. The teaching staff is large, the professor being provided with numerous assistants of all grades—a necessary provision for teaching in small groups—and each member of the staff has a considerable portion of his time free for investigations. Unfortunately the American genius for organization robs the teaching of much of its apparent freedom, of much of its educational value. There are too many demonstrators, so that the student seldom has the opportunity of muddling along and out for himself—an experience that is worth many hours of successful guidance through perfectly organized and equipped experimental procedures. The atmosphere of investigation that is found in these departments with their large staffs of professional scientists is of great potential educational value, but too often the student's time is so accurately mapped out and organized that he has no time to benefit from the best of all features of these American pre-clinical departments—the intimate contact with original workers. The student body of those better American schools is a selected one, and does not present the wide variations of intellectual capacity that are found in our more democratic institutions, but even so I think the bulk of the students pass on from their pre-clinical years in a state of intellectual indigestion. They know a great deal about many things, but they have not got a wide conception of the biological problems that the pre-clinical years are designed to provide. A few men always are receiving inspiration and acquiring enthusiasms, and this makes up, and perhaps more than makes up for the defects—defects that are less serious than those to be found in the pre-clinical years of most medical schools. On the whole, then, these schools provide a pre-clinical education of high standard, and provide opportunities for stimulating and encouraging the better students to an attitude of inquiry and investigation. These schools number a dozen or so; from the others—good though many of them are—we can learn little more, for they are all of the same university type in their pre-clinical departments, and aim at the standard, set by their more richly endowed sister institutions.

The clinical departments of these better medical schools are organized as university departments. In such subjects as medicine and surgery you find a professor in charge with numerous assistants—at one school these numbered 40—some full-time, some part-time, and adequate laboratory accommodation. The students' work is confined to the university term. They act as clerks and dressers for rather shorter periods than in this country, and have fewer cases allotted to each, but their notes are supervised to a much greater extent, and they carry out more laboratory investigations themselves. There are no systematic lectures, but clinical lectures, clinical pathological conferences and informal teaching in small groups are designed to cover most of the ground. Each student is encouraged to look up the literature, and to write short essays or commentaries on subjects incidental to the ward work. In all its phases work is more closely supervised than in this country, and they gain a more extensive knowledge of the investigations that have led to present knowledge, and that are being carried on at present to advance knowledge. This is largely due to the number of young workers attached to the departments, each of whom is expert in and working in some limited field. Their teachers are therefore largely somewhat inexperienced as clinicians, and in this I think lies the main defect of their system. Good education in such subjects as medicine and surgery requires good practice as its foundation, and the example of first-class clinicians handling patients and their problems cannot be dispensed with. I do not mean that there are no first-class clinicians attached to these clinical departments, but I believe their students come in contact with many clinical teachers who are not chosen primarily because of their clinical experience and pre-eminence.

To a large extent the deficiencies of the undergraduate training are rectified by the appointment of every graduate as an intern to his teaching hospital or to some other hospital recognized by the university. The intern works in several departments in turn, and the better ones become "residents," the total period of service lasting at least one year and often two years or more. At the better teaching hospitals, a resident and four or five interns are usually allotted to a group of 50 beds. The work of the interns need never be hurried, and they have time to investigate their cases as fully as possible in the wards and laboratories. The interns must, of course, take much of the responsibility from the student, but the system of education cannot be judged fairly without regarding the internship as an integral part of it. The less well-endowed schools, with their less elaborate organization, less numerous staff and laboratory facilities give an education that is more suited to the average student, but there can be only approval for a scheme that offers the best possible education to the better men. It is no spirit of disapproval with what

has been accomplished that I say they would do better still with more numerous experienced and able clinicians on their teaching staffs.

The Canadian universities at Toronto and Montreal are organized on much the same lines, but are not so wealthy. With fewer salaried assistants in the clinical departments, they make more use of the practising clinicians for teaching. As educational institutions for turning out a medical man well trained to work out the problems presented by every sick person and sufficiently instructed to serve the public, they are, I think, more economically efficient from a national point of view than those very expensive American schools. Further, in Toronto and Montreal there are ample opportunities for the better men to develop and to devote themselves to investigation.

The education in our own London hospital medical schools has developed around the ward work of the clerk and dresser. The ward appointments are the foundation, and the pre-clinical departments which have been added were until recently mere adjuncts of the clinical school. They have gradually been improved and provided with staffs, the members of which are making careers in their subjects, but they are not yet all of university standard, though this defect is steadily disappearing. The clinical teaching, on the other hand, is in many ways the best in the world. You have as teachers the most experienced and skilful clinicians, and the clerks and dressers bear responsible parts in the ward work. They study with examples of the best practical work constantly around them. They are free to teach themselves as students are nowhere else. They are less hampered by supervision than is the case in America, and althought this develops the good man satisfactorily, I think the less good would be the better for closer supervision and more guidance. The man well trained in the pre-clinical subjects, however, finds too little scope for the application of the methods of study and investigation that the sciences have taught him. This is partly because of financial difficulties, but largely because if you have the most experienced clinical talent to guide your work, you cannot also have the men with time and opportunities to keep up with the ever-moving pre-clinical sciences. The recent experiment of forming professorial units in the various London hospitals is an attempt to provide small departments of university type to act as a link between the pre-clinical sciences and the clinical departments, and to provide an opportunity for clinical medicine to utilize the methods and the laboratory facilities of the sciences in the closest association with ward work, without altering the essential nature of London's clinical teaching —teaching by successful and experienced practising clinicians. Another possible fault in our system is that there are too few house appointments in the teaching hospitals to enable more than a minority of the graduates to obtain the advantage of what is the most valuable appointment the school has to offer.

I have said nothing so far about Oxford and Cambridge. These universities give the best training in the pre-clinical sciences for the man who can make use of them. They give time and opportunities for the student to live with his science, and to come in close contact with great men in all branches of learning. A pre-clinical education at one of these universities and a clinical education at a London hospital is a combination that offers, I believe, opportunities for the better man as good as can be found anywhere in the world to-day.

If I have said little so far about the life of the student in these various schools, I have not been unmindful of the importance of this aspect. In Australia and America the vacations are long. In London there are practically none, once the clinical years are reached. In Australia there is a wonderful climate, and there is the most wonderful country with wonderful plant-life and bird-life within easy reach. Football, cricket, tennis, golf, bathing, fishing, race-meetings, and indeed every form of game and of sport are easily obtained. In America they are obtainable, but usually so expensive that the medical student has little chance to enjoy them. In term time the nose of the American student is close, too close, I think, to the grindstone. In London the vacations may be negligible, but the opportunities for exercise, for hobbies of all kinds and for relaxations are present throughout the year. Throughout the day also there is time for discussions, time for friendships. If other schools also have unions and student societies, none can boast of such a Square as we have, and nowhere in the world is there anything to compare with a seat on a summer day on the edge of the Fountain.

I have refrained from making direct comparisons, for this would be unjustifiable without a more intimate and a longer knowledge of each medical school. In pointing to a few contrasts, I have endeavoured to show how we can learn from the study of other schools the lines along which we can best develop our own. What is best must always be a matter of careful consideration, for experiments in education must never be lightly undertaken, for they are terribly expensive in men and in time. You might well ask why I should speak to you of matters over which you have no control, but medical education is not a question of the present; it is an ever-present problem, and the future of our School will soon be in your hands.

F. R. FRASER.

MORE MEDICAL NOTES.

By Sir THOMAS HORDER.

ON INFLUENZA.

(1) There is as yet no exact criterion in the diagnosis of influenza. The nearest approach to an exact criterion is a certain clinical picture, more easily recognizable and more reliable during an epidemic than at other times. The picture varies during different epidemics, and we do not yet know if this is because influenza is a group of different infections or because the nature of the secondary infection varies in different epidemics. In the absence of an epidemic it is only the sporadic cases that are unusually severe that can at present be diagnosed with certainty.

(2) Like most acute infections, influenza has malignant, mild and abortive forms in addition to the "ordinary" form. There is very little doubt that some attacks of the disease, and by no means always mild ones, are apyrexial.

(3) If the pyrexia in influenza persists for more than seven days it is highly probable that a focal (inflammatory) lesion is present. In the great majority of cases the lesion is in the respiratory tract. Conversely, a pyrexial patient who presents no signs of a focal lesion after seven days is probably not suffering from influenza. Consider then (especially) paratyphoid and typhoid fevers.

(4) The most characteristic pulmonary lesion in influenza is a bronchiolitis. The physical signs of this lesion, and therefore the physical signs most characteristic of influenza, are weak breath-sounds and copious small *râles*.

(5) The pulmonary physical signs in influenza often seem quite inadequate to explain the degree of illness of the patient and (or) the persistence of the pyrexia. They may seem inadequate because their extent is small, or because they are the signs of "congestion" only—fallacious reasons, and born very largely of a mistaken effort at comparing the pulmonary lesions in influenzal infection with those of pneumococcal infection.

(6) There is probably no pleuro-pulmonary lesion which may not result from influenza with secondary infection—bronchitis, pneumonia, pleurisy, empyema, abscess of lung and gangrene.

(7) When consolidation (hepatization) of the lung occurs as the result of pneumococcal infection in influenza its course is rarely that seen in penumonia. Crisis is not to be expected, or, if it occurs, it is likely to be delayed. Resolution, too, is often late and also slow. Again, recrudescences of lobar consolidation are frequently seen in the subjects of influenza, and relapses, which are distinctly unusual in pneumonia, are not at all uncommon in the former disease.

(8) The sputa may have diagnostic value in influenza: (i) Copious, pink, frothy sputa in an acute pyrexial illness with marked respiratory symptoms and signs; and (ii) green sputa, the colour being due to altered blood.

(9) The most helpful therapeutic agent available so far in severe influenza is fresh air. To secure this, day and night, is of the utmost importance. The bed should be placed near the centre of the room. Curtains, blinds, screens and all excessive furniture should be discarded. Air and warmth are both desirable in the room, but if either must be sacrificed, it should be warmth.

(10) The control of pyrexia in influenza follows the rule of fevers in general: it should be effected by aero- and hydro-therapy, not by drugs. The management of the bed-clothes is very important, and is seldom understood. The patient's "feelings" are often misleading: the higher the temperature, the more rapidly does he lose heat from the skin; the more rapidly he loses heat, the more "chilly" he feels and the more bed-clothes he demands. Left to himself, therefore, he tends to render ineffective the natural means by which his fever is controlled. The sole criterion as to the amount of bed-clothes to allow is the temperature of the patient at the moment, not his sensations.

EPILEPSY: THE ATTACK.

EPILEPTIFORM attacks have been universally studied since the age of Hippocrates; but the essence of their nature remains as little determined now as when Lucretius penned the following account of a convulsive seizure:

> "Oft, too, some wretch, before our startled sight,
> Struck as with lightning, by some keen disease
> Drops sudden: By the dread attack o'erpowered
> He foams, he groans, he trembles and he faints;
> Now rigid, now convulsed his labouring lungs
> Heave quick, and quivers each exhausted limb."

Gradually knowledge has been collected by constant and accurate clinical observations, so that now types of attacks with various outward manifestations are recognized. For descriptive purposes—and for these only, as the attack is purely an expression of disturbed physiology and not a disease in itself—they may be grouped as followed: (1) *Grand mal*, (2) *petit mal*, (3)

pyknolepsy, (4) narcolepsy, (5) inhibitory epilepsy or cataplexy, (6) myoclonic epilepsy, (7) co-ordinated epilepsy, (8) tonic epilepsy, (9) epilepsy partialis continuans, (10) reflex epilepsy, (11) local epilepsy. Only by aligning all the facts is it possible to come to a conclusion as to the probable nature of the neural mechanisms in epilepsy.

Grand mal.—In these attacks there is a loss of consciousness and severe muscular spasm. The attack may be conveniently divided into several stages. Firstly, a sensation or a local spasm, known as the aura, heralds the onset of the attack, and may in some cases permit the sufferer time to lie down or to remove himself from danger. This is rapidly followed by the second stage, in which unconsciousness sets in and the patient falls suddenly to the ground. Almost immediately—sometimes even before the second stage—there is the generalized tonic spasm of muscles which characterizes the third stage. The sudden spasm of the muscles of the thoracic cavity forces air through previously spasmodically contracted vocal cords and causes the "epileptic cry"; this, however, is a comparatively rare symptom of the attack. The eyes may or may not be open; and the pupils dilate as cyanosis progresses. The posture of the limbs varies; usually the arms are slightly abducted at the shoulder, the elbow and wrist are flexed while the fingers are clenched over the thumb. The legs are extended, seldom flexed until the later stages of the attack. But bizarre attitudes may be adopted during this stage. In some cases the violence of the spasm is very great and the shoulder may be dislocated. At first the face pales, then flushes and ultimately becomes livid, on account of the fixation of the respiratory muscles. The cyanosis rapidly increases, but lessens after a few seconds, when the onset of clonic movements denotes the fourth or clonic stage. Careful palpation of the muscles will reveal that following the tonic spasm a few weak vibratory tremors take place in the muscles, which vibrations gradually increase until there are slight visible remissions; as these become deeper the muscular contractions become more shock-like, until the head, arms, trunk and legs are jerked with great violence. Frequently the most severe clonic spasm is the last. During this period air is sucked in and expelled, churning up the saliva and causing the frothing at the mouth, and the tongue is bitten through the clonic movements of the jaw. Gradually the lividity passes off, the spasms become less frequent but not less severe, until they end and the patient lies senseless and prostrate, in a condition of coma; this may be termed the fifth stage. Imperceptibly the coma passes into a deep sleep lasting two or three hours, from which the patient arouses with no recollection of the previous sequence of events. In a few cases, however, there is a further stage, the sixth, which is of the greatest medico-legal importance. This is characterized by a return of an ability to perform the most complicated acts; though during these acts the patient may appear conscious and normal, they are acts performed outside the consciousness of the patient himself. For instance, a gentleman who had a mild attack in Edinburgh "woke up" in a street of Glasgow, having bought a return railway ticket and travelled by train to Glasgow. But post-epileptic automatisms may not be so harmless, and more than one epileptic has reached the court of law on a murder charge for a foul deed perpetrated during a post-epileptic state.

It is of importance to remember this condition and, further, that it may not only last minutes, but hours, and in a few instances even days. During the attack, probably in the tonic or clonic stage, the bladder and rectum may be emptied. Gowers was of the opinion that this was not due merely to the state of the bladder or rectum or to the loss of consciousness, but was the result of some peculiarity in the convulsion, since it occurs invariably in some patients and never in others. The duration of the attack varies, but it is rare for the tonic and clonic stages to last more than a few minutes, though the following coma and sleep may be of several hours' duration. It would appear reasonable to mention at this point that a patient may pass from one attack into another with no intervening stage of consciousness—the *status epilepticus*, which is fraught with considerable danger to life unless treated with promptitude and fortitude. Extreme measures may be necessary to cause a cessation of attacks before death ends them.

Petit mal.—This type of attack is characterized by a momentary loss of consciousness. The individual will suddenly stop in his occupation, look vacant for a moment and then go on with what he was doing; he may even finish a sentence which he has commenced, and be aware of having had an attack only through finding that he has dropped something which he held in his hands, or that he is the object of anxious observation. The face may pale and then flush. Occasionally a slight spasm may be associated, such as a nod of the head or a jerk of the limbs. Usually the patient is dull for a little time after the attack and he may perform some complicated action, such as running into the corner of the room—an occurrence reported by Wilson in one case. Many a so-called hysterical attack is really an automatism following a *petit mal* attack of so brief duration as to elude observation. It is of interest to note that progressive mental degeneration is more commonly associated with attacks of *petit mal* than with attacks of *grand mal*.

Pyknolepsy.—In 1906 Friedmann and in 1907 Heilbronner gave the first descriptions of this condition. Since then many papers have appeared on the subject, and in this country Adie has written an excellent article. According to Friedmann there is only one symptom, namely the inhibition of the higher psychical processes lasting from five to ten seconds. The power of speech and of voluntary movement is in abeyance, but automatic movements are retained. The child sits or stands with the limbs relaxed, staring vacantly in front of him; the eye-balls may roll upwards, the lids may flicker, but there are no convulsive movements, and consciousness is never entirely lost. Recovery is immediate and complete. In other words, the attack is indistinguishable from "*petit mal.*" But there are characteristics that make this condition distinctive. The frequency of the attacks is great—from six to several hundreds in the day; mental deterioration does not set in, and the child learns his lessons, remains affectionate and mentally alert—this is in contra-distinction to "*petit mal.*" Again, the attacks commence suddenly in healthy children between the ages of four and ten years, and end as abruptly after a few days, weeks or years, leaving the child perfectly healthy. These attacks are quite uninfluenced by the recognized therapeutic measures, such as bromide and luminal. The whole condition is one of importance not only for diagnostic purposes but for prognostic.

Narcolepsy.—A more interesting and intriguing syndrome could hardly be found in the domains of neurology. Let one cite a case as an instance. A man in perfect health was profoundly amused at an incident; without warning he slid to the ground and fell asleep for fifteen minutes. In this case there are two points of extreme interest—the emotional afferent stimulus and the consequent sleep. It is by no means a new condition, for both Gowers and Jackson allude to attacks of sleep in association with epilepsy; but recently it has become more common, and excellent monographs have appeared by Adie, Wilson and others. Adie suggests that it is a disease by itself; such a tenet is difficult to uphold, as many cases of narcolepsy develop epilepsy or are associated with it. In short, it appears to be a variant of epilepsy and is best considered as such. The association with emotion raises the possibility of such attacks originating at the level of the thalamus—the supposed level of emotional sensations. Such speculation is not devoid of probability, for it is well recognized that tumours involving the third ventricle have as a prominent symptom marked drowsiness. Though rare, narcolepsy raises problems regarding the association of emotion with motor inhibitory centres, for though apparently asleep, more than one narcoleptic patient has asserted that he is aware of happenings around him.

Inhibitory epilepsy or cataplexy.—Ordinarily the syndrome of epilepsy is considered to be essentially kinetic or hyperkinetic; though true in many cases it is not universally so. And the question arises as to the possibility of immobility forming the prominent feature of an attack. Both Jackson and Gowers interested themselves in such conditions, and Gowers was of the opinion that discharges in epilepsy may inhibit movement. A girl with an abscess in the pole of the right temporo-sphenoidal lobe experienced sudden gustatory sensations, which were immediately followed by a complete paralysis of the left face, arm and leg, lasting from ten to twenty minutes; observation failed to reveal any tonic or clonic spasms. The patient remained conscious throughout. The close relation of this form of epilepsy to narcolepsy and catalepsy is self-evident. It almost appears as if the paralysis consequent to a hyperkinetic attack as described by Todd has arisen without the actual convulsion. Jackson speculated "that there may be discharge spreading slowly in a motor cortex of the middle level, excessive enough to cause slight after-exhaustion of some of its elements, although one not strong enough to overcome the resistance of lowest motor centres and thereby to produce actual convulsions." Such a theory would explain inhibitory epilepsy.

Myoclonic epilepsy.—Patients subject to attacks will voluntarily state that they have the "jumps"; these take the shape of irregular twitchings of a limb, involving various muscle groups. While combing the hair in the morning the comb will suddenly fly out of the hand across the room. The breakfast cup will tumble across the table. It is never associated with a loss of consciousness. Though this occurs most frequently in patients suffering from major epilepsy, it also occurs as an isolated symptom in an epileptic subject. In children it is more common, and is said to be in some cases of familial character, as described by Unverricht under the name of "myoclonus epilepsy." Wilson lays stress on this symptom as being of early diagnostic value in doubtful cases of epilepsy. The movements in this type are possibly originated at the middle level of the motor system, but they have also been stated to be of spinal origin.

Co-ordinated epilepsy.—Attention has been drawn to the confusional state following epileptic attacks, during which various automatisms may be performed outside the consciousness of the patient. Such automatisms may initiate the attack. Wilson describes the case of a boy with a left frontal abscess who waved his right arm in circles as if turning the handle of a barrel-organ. The "epilepsia cursiva" of Boötius is of the same nature. A recognition of this type of epilepsy is of

utmost value, for such movement must originate at the highest level of the neural axis. The difficulty of distinguishing between a hysterical attack and such a true epileptic attack becomes great.

Tonic epilepsy.—These attacks are characterized by tonic contractions only, to the entire exclusion of clonic spasms. The posture adopted in many such fits—the flexion of the arms and extension of the legs—has suggested that the physiological localization is in the posture-effecting mechanism of the mid-brain.

Implication of the cerebellum has been mentioned in explanation of such attacks; but the excellent description given by Purves-Stewart suggests the attitudes adopted in a decerebrate animal with or without the cerebellum, so that cerebellar origin is unlikely. In favour of this is the statement by Holmes that he has not seen a tonic fit in a lesion of the cerebellum alone, but only when the region of the fourth ventricle was implicated.

Epilepsy partialis continuans.—This condition is essentially different from myoclonic epilepsy in that the twitching movements are constant though irregular in time. Commonly the twitching movements are localized to one limb, as in a case of this nature where the movements, limited to the left hand and fingers, had been present for five years. This patient also suffered from *grand mal* attacks. The twitching movements resemble those seen in a local motor fit, and in no way resemble any tremor or choreiform movement. In other words, they are movements that resemble those associated with disturbances of the second neural level of Jackson, the pyramidal cortex. Yet at operation in one such case as reported by Wilson no abnormality of the cortex could be detected.

The condition is undoubtedly rare, but was recognized in 1894 by Koshewnikow, since when cases have been reported by Orlowski, Spiller and others.

Reflex epilepsy.—Attacks may result from some external stimulus. For instance, a man subject to attacks finds that if he catch his left toe against the kerb in the street or the step of a stair, he immediately has an attack of the "*grand mal*" type. This is a rare clinical observation among those subject to attacks. Again, Oppenheimer, and later Holmes, have described cases of so-called acoustico-motor epilepsy: a sudden loud noise, such as the dramatic firing of a revolver behind the patient, causes him to fall to the ground in a convulsive seizure. Other types could be cited from the literature, but it is sufficient to remember that attacks may be precipitated by some external sensory or afferent stimulus.

Local epliepsy.—A description of such attacks would necessitate a description of the various auræ of epilepsy. The aura, whatever its nature, be it either sensory or motor, may constitute the whole attack; and as the aura is an expression of physiological disturbance at a definite anatomical level, such attacks are classified under the term of "local epilepsy."

Criticism may be levelled at such schematization of various epileptic attacks, on the grounds that several types of attack may be encountered in one patient. But it is of help in deciding treatment, in giving a prognosis, and lastly in the understanding of neural mechanisms involved in epilepsy. At present we are not concerned with treatment and prognosis.

Several theories are offered as working hypotheses to explain the neural mechanisms in such attacks.

First is the irritation theory. This is based largely on experimental work, which has shown that electrical stimulation of the Rolandic cortex and its neighbourhood produced local and generalized convulsions. However, it is as yet undecided whether electrical stimulation of the cortex causes excitation or inhibition of the cells; in favour of the latter, Vogt's work can be mentioned, wherein he showed that electrical stimulation of the cortex caused marked chromatolysis in the nerve-cells. But apart from such experimental difficulties there are obvious grounds, as Gowers suggested, for believing that a fit may be due to focal irritation, from which a discharge spreads with increasing force to the motor area. Such an hypothesis is well upheld by clinical evidence; the aura of a *grand mal* attack is the focus of the discharge, which spreads to the motor cortex, excites it and gives rise to the convulsive seizure. But does this sufficiently explain such forms as pyknolepsy, inhibitory epilepsy or narcolepsy?

These other forms immediately suggest other possibilities, and in 1873 Hughlings Jackson expounded his release theory. Martin has more recently summarized this point of view. Briefly, it is suggested that the highest cortical centres normally control lower centres by inhibition; thus an attack is an expression of decontrol or progressive loss of inhibition spread over various physiological levels. The tonic stage is loss of cortical control and release of mid-brain mechanisms; the clonic stage is loss of cortical control and of mid-brain control with release of spinal mechanisms, the clonic movements being likened to the walking reflexes of a "spinal animal." If such an explanation be correct, then rapid loss of control by higher centres should produce a convulsion during the induction period of surgical anæsthesia; practically speaking it never occurs, and certainly only with the greatest rarity in epileptic subjects. Again, in a cataplectic attack the plantar reflex may be extensor, yet throughout the attack the

patient may remain conscious—in other words, the higher centres are not inhibited.

This leads one to a third possible theory, namely, the short-circuit theory; here, instead of the higher centres being involved, the "stimulus" which causes the attacks may pass along paths and jump to other paths at a lower level and never reach the highest level. In favour of such a theory are the facts that children whose highest centres are still practically undeveloped, and the feeble-minded, whose cortices are poorly developed, are more prone to convulsions than are normal adults. As yet it has not been satisfactorily proved that in the absence of a physiological block, stimuli will seek expression along other pathways, and further it is known that neural pathways carry specialized stimuli, which are rarely, if ever, interchangeable.

Lastly there is the explosive theory; it differs essentially from the others because for its understanding it is necessary to consider the nervous system as a whole and not as a system of pathways. Such a theory has been suggested, because it is difficult to conceive of a stimulus proceeding in such an orderly fashion as Hughlings Jackson would wish, and yet causing such a dramatic sudden unconsciousness and fall as is frequently seen; also, the motor expressions of a fit are frequently of the greatest disorder. Though not identical, the fit may resemble an anaphylactic reaction to which the nervous system as a whole responds.

It is obvious that no one mechanism will explain all attacks, and it is therefore probable that there is a combination of the mechanisms enumerated. The first three mechanisms have received much support from experimental physiological and anatomical research; but investigation of the chemistry of the body as a whole and of individual cells offers now a most fruitful field for elucidating the cause of an attack.

What, then, is epilepsy? By many it is considered a disease, but owing to its close association with many pathological states of the body as a whole, and of the central nervous system itself, at most it can only be counted a symptom-complex. The lack of, or rather the inability to find, organic lesions does not in itself warrant classifying it as a disease; rather is it a manifest admission of the poverty of present-day methods of examination of disordered functions. And to the establishment of such methods the sciences of biochemistry, electrology, etc., should be made more frequently available. But though such investigations may have to be carried out in a laboratory, careful clinical observation along with balanced and critical reasoning may prove of inestimable value; and on account of this every patient having attacks should be a fund of information, and should never be branded "just an epileptic."

The works of Hughlings Jackson, Gowers, Turner, Collier, Holmes, Wilson, Lennox and Cobb and others have been freely consulted, and much appreciated in the preparation of this article. E. A. C.

PHASES IN THE POETRY OF VACCINATION.

(a) *Anglo-Saxon:*

LULLABY.

Lollai, lollai, litil child!
Whi wepistou so sore?
Mumy hi ame roodie wilde
At thon gloomfizzed Doctoure.
Im screeged m'armwid a needil;
Hit smairts an roodles deare.
Never wid pa lemmeebil *
While ee alives were.
Lollai, lollai, litil child,
Child, lolai, lullow!
Into poxrid world
Incommen so ertow.†

* Permit me to languish.
† Art thou.

(b) *Elizabethan:*

MARKS OF BLISS.

The joyous pocks floating on ivor'd arms,
Or legs an gentil ladies gowns require,
Discharge their crustie pustooles mid alarmes
Of faces fever'd under raishes dire.
The lymphat from yon vaccinial cow
At the deare murmurs of her calf did fall,
Now fires thy blood to healthy thee endow,
Thou pretty toddler eke not fit to crawl,
Thy gentle skynnie keep from poxes small!

(c) *Wordsworthian:*

THE SOLITARY TAKER.

Will no one tell me whence those rings?
Perhaps the rosy western glow
Of Phœbus' kisses? serpent stings
That bit thee long ago?
Or is it some less noble fate,
Some epidemic spied too late
That's made the girl be vaccinate,
Lest sad Tuscania's spotted crew
Should bring the pox to me and you?

(d) *Browningesque:*

THE VACCINATOR'S FUNERAL.

James once was proud to vaccinate a nurse;
Then thinking better
Filled he the bank account, the private purse,
Appointments by letter.
Vaccinated he the hairy arm of man,
Skins tough as leather;
Sharpened up scalpel or bought a new trepan
Four pocks together.
Soon growing *too* bold tried a Duchess (Park Lane),
Rarer, more tender;
Self-gathered for an outbreak, purple pain
Chafed by suspender.
Left he the common herd, pushed to the top,
Crowded with culture;
Died then a common death after the drop;
Seek we sepulture.
Let us begin to rattle up the hearse,
Singing together,
Who changed from nurse to purse—from good to worse—
Now ends his tether.

(e) *Of the Decadent Nineties: "Studies in Strange Sins."*

DANSE DES PLAIES.

Her body quivers, she
Quivers; she turns and turns
On herself furiously;
A fiery itching burns
Her leg inordinately;
Desire within her burns
To scratch those lymphy stings.
She on herself returns,
Across her bed she flings.
Oh, sponge, canst cool those stings?
Her desires drown the night
With pruritic appetite.

F. C. R.

THEODOR BILLROTH (1829—1894).

TO the list of instincts compiled by the psychologist and the theologian, Sidney Lee has added the instinct of commemoration. A cynical generation whose liver has grown large with the keeping of centenaries has come to look upon these but as resuscitation chambers in which famous men are privileged for a few sweet moments to recover from the coma begotten of the Opium of Time.

What shall be said of Theodor Billroth, the centenary of whose birth was celebrated last month in his native town by the banks of the Blue Danube? Shall not he be remembered as the Master Surgeon who, by breaking down the barriers between medicine and surgery, has made surgery an indispensable branch of therapeutics?

In 1872 he performed the first resection of the œsophagus, in 1873 the first complete excision of the larynx, and in 1881 the first successful resection of the pylorus. In the early days of his career Billroth was known as a daring surgeon, who operated on what he himself described as hopeless cases. With increasing experience of operable and inoperable cases he became more and more conservative. His operative technique was as sure as it was swift. He lectured while he operated; indeed it was said of him that he introduced an operation into his lecture like an illustration into a book. His operations, performed with the delicate touch of the artist, did, indeed, illustrate his lectures, original in substance, clear and simple in delivery. The intestinal operations of the "Father of Visceral Surgery" Naunyn described as autopsies *in vivo*. Each operation was begun as though the case were typical, but the operator, ever ready to take upon himself infinite responsibility, changed the text-book operation to suit the individual case. Nothing ever ruffled his equanimity. Billroth lectured and operated in the morning, saw patients and worked in his laboratory in the afternoon, in the evening found complete relaxation at the theatre or the opera, or in the large circle of his friends, and devoted the greater part of the night to literary work and to his correspondence. Like the late Lord Haldane, he required but little sleep. How a singularly busy man could find time for reading, studying and writing can only be explained by his ability—natural or acquired, who can say?—to take up any subject at any moment and concentrate upon it to the exclusion of all other thoughts. His capacity for relaxation was as great as his gift of concentration.

Of his written contributions to surgery the following serve as samples:

His *Lectures on Surgical Pathology and Therapeutics* (1863) can still be read with pleasure for their grace of literary form; eight editions appeared during their author's lifetime. The work has been translated into nearly every modern language.

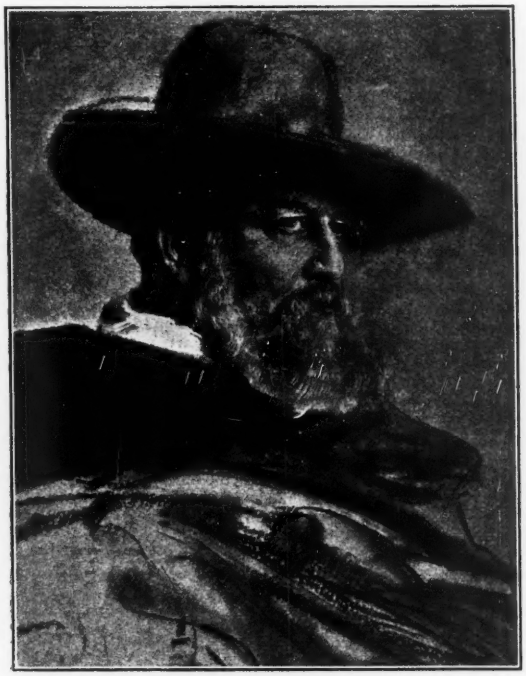
The Surgical Clinic of Vienna (1879) is unique in the literature, marking as it does the beginning of the era of statistical surgery. It was Billroth who originated the modern "follow-up" system.

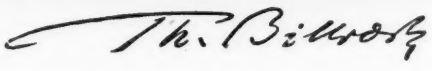
The Medical Sciences in the German Universities: A

The portrait is reproduced by kind permission of the publisher, Julius Springer, Vienna.

Study in the History of Civilization (1879; translation by W. H. Welch, 1924) is perhaps the most characteristic product of Billroth's pen. The virile style, the epigrammatic wit, the attractive breadth of vision are here combined with a pleasing historical sense.

Billroth enjoyed life to the full and entertained lavishly. When, however, he felt the grasshopper as a burden, he put his house in order and in the nearness of his last necessity spent his days in quiet contemplation of the sun and the mountains, alone with his thoughts.





Music was the solace of his life, though as a composer he did not take himself too seriously and often murdered his darlings.

He was a strikingly handsome man, with twinkling blue eyes, the stoop of the scholar, the voice of the musician, and the language of the orator. The gospel of his life was effort. To have striven, have made an effort, to have been true to certain ideals—this alone is worth the struggle. How Osler's words put the halo of the saint around the frame of human frailty!

Billroth's work has been piously carried on in his spirit by his disciples—Mikulicz, Czerny, Gersuny (who wrote his life), Eiselsberg: who can name them all? It is through them that the school continues; through them the master is still among us. *Scribantur haec in generatione altera.*

It is better for mankind to suffer from an overdose of the vitamins of centenaries than for its benefactors to suffer from the deficiency disease of oblivion.

W. R. B.

ABERNETHIAN SOCIETY.

A Meeting of the Society was held on Thursday, March 7th, at 8.30 p.m., Mr. Burrows in the Chair.

Prof. Fraser gave an address entitled "Contrasts in Medical Education." A full report of the address is concluded elsewhere in the May number of the Journal.

A vote of thanks to the Professor, proposed by Dr. George Graham and seconded by Mr. Baxter, was carried with acclamation.

STUDENTS' UNION.

RUGBY FOOTBALL CLUB.

St. Bartholomew's Hospital *v.* London Hospital.

Hospital Cup Semi-final.

On Tuesday, March 12th, at Richmond, we met London Hospital, whom we beat in the final last season.

On this occasion the selected sides were both almost identically the same as in the previous meeting, but at the last moment we were deprived of the services of our captain, R. N. Williams, and of H. E. Edwards, both having succumbed to influenza.

The game was fought out in typical Hospital Cup-tie fashion, and there was no scoring in the first half. We were further handicapped when J. T. Rowe dislocated his shoulder after ten minutes' play. A. W. L. Row, who had nobly come into the pack at a moment's notice, went to full-back and Grace moved up to his old position on the right wing.

The second half was a repetition of the first, relentless tackling preventing either side from making much progress, until a quarter of an hour from the end, when after a bad mistake by one of our forwards, followed by a quick heel from the loose by the London and a dash and a feint to pass by G. V. Stephenson, the latter just managed to cross in the corner as he was brought down. Bart.'s then played the best football of the match, our seven forwards getting the ball in the scrums and holding an advantage in the loose, and with J. T. C. Taylor playing in his best form, it seemed as though we were going to pull the match out of the fire, but our centres were somewhat off form and were closely marked by their opposite numbers. Two minutes from the end the ball bounced awkwardly for Row, and Rae following up scored between the posts for Stanley to convert.

As was the case last season, G. V. Stephenson was unable to move far on his own, but he scored the all-important try, and his kicking was of great use to his side.

Our forwards played well, although they missed Williams's leadership, and in spite of being one short most of the game, managed to give the backs more than a fair share of the ball. The latter did their best to open up the game, but the close marking of the London backs kept us in check. Row played well at full-back and never failed to find touch.

Result: London Hospital, 1 goal 1 try (8 pts.); St. Bartholomew's, *nil.*

Team.—A. H. Grace (*back*); J. T. Rowe, T. E. Burrows, C. B. Prowse, J. D. Powell (*three-quarters*); F. J. Beilby, J. T. C. Taylor (*halves*); C. R. Jenkins, H. O. Robertson, V. C. Thompson, W. M. Capper, J. M. Jackson, J. R. R. Jenkins, A. W. L. Row, A. Barber (*forwards*).

Although we have lost the Cup, our "A" team has regained possession of the Junior Cup, the results being:

1st Round: Beat U.C.H. "A" 76—0.

2nd Round: Beat London "A."

Semi-final: Beat St. Thomas's "A."

Final: Beat Guy's "A" (holders), 20—3.

On March 16th the Hospital defeated the London Scottish at Winchmore Hill by 3 goals (1 penalty) and 2 tries (19 pts.) to 2 penalty goals (6 pts.).

On March 23rd, at Winchmore Hill, Moseley were beaten by 4 tries (12 pts.) to 2 goals (10 pts.), the winning try being scored by Powell in the last minute of the game.

On March 30th we journeyed to Bath for our last match, where, playing under mid-summer-like conditions, we were leading by 3 tries to 1 when Beilby was carried off the field. Playing seven forwards, we were unable to get the ball after this, and we were eventually beaten by 20 pts. to 14.

ASSOCIATION FOOTBALL CLUB.

ST BARTHOLOMEW'S HOSPITAL *v.* U.C.H.

This semi-final of the Hospitals Cup was played on February 25th at St. Thomas's Ground, Chiswick.

Bart.'s set the pace and attacked first. The forwards seemed excited and were rather unsteady, causing one or two chances to be missed. They made amends later, when Gibb scored with a hot shot. Within a few minutes, however, U.C.H. had equalized in a scramble around our goal. Just before half-time Hunt succeeded in hooking the ball into the net, thus giving us the lead.

After the interval the game ran very much in our favour, Sykes and Burgess adding goals as a result of good team-work.

The whole team did well, the defence being particularly steady.

Result: St. Bart.'s, 4; U.C.H., 1.

Team.—W. A. Mailer (*goal*); R. McGladery, G. R. Morgan (*backs*); A. W. Langford, C. A. Keane, J. R. Crumbie (*halves*); A. M. Gibb, I. E. Phelps (capt.), W. J. Burgess, W. Hunt, R. A. Sykes (*forwards*).

ST. BARTHOLOMEW'S HOSPITAL *v.* MIDDLESEX HOSPITAL.

United Hospitals Association Cup Final.

On Wednesday, March 6th, we contested the final with Middlesex Hospital at Wembley Stadium.

After our bright performance against U.C.H. in the semi-final we were confident of success, but realized Middlesex must be a good side, as they beat Guy's 3—1 in the other semi-final.

The game started at a tremendous pace, and after an unsuccessful attack by our opponents we pressed for ten minutes, being very unlucky not to take the lead. The first goal was scored for us by Burgess, who managed to get the ball past the Middlesex goalkeeper from a difficult angle.

For a time we enjoyed most of the play, and it was only the brilliant work of the opposing backs and goalkeeper which prevented a further score.

Middlesex, however, were not to be outdone, and after some bewildering movements brought the scores level. Soon afterwards, in an endeavour to head the ball away, Langford put through his own goal. Before half-time Hunt scored for us with a good shot, and we crossed over with the score "two all."

For the greater part of the second half Bart.'s were usually attacking, but could not score, while with two magnificent efforts Clyde, ably supported by a forceful attack, obtained two goals for Middlesex.

Middlesex Hospital thus won the trophy for the first time in their history.

On the whole they deserved it, for they took all the chances which came their way. Had we been half so opportune we must have won easily.

Team.—J. H. Watkin (*goal*); R. McGladery, G. R. Morgan (*backs*); A. W. Langford, C. A. Keane, J. R. Crumbie (*halves*); A. M. Gibb, I. E. Phelps (capt.), W. J. Burgess, W. Hunt, R. A. Sykes (*forwards*).

JUNIOR CUP FINAL.

The second team beat Guy's, the holders, by 8—3 and U.C.H. by 6—0 before meeting St. Thomas's in the final. The game was marred by an unfortunate accident to Caplan, who injured his knee after five minutes. Until the interval the game was very fast and exciting, both teams trying hard for a lead. Bart.'s obtained the upper hand, however, and led by 4 goals to 2.

Afterwards our opponents were completely overplayed. Splendid combination by our forwards, backed up by an excellent defence, enabled Bart.'s to win by 11 goals to 3. Especially prominent were Hiscock and Brookman in defence, and Gilbert and Shackman in attack.

Team.—J. B. Johnson (*goal*); L. A. Hiscock, R. L. Wenger (*backs*); F. E. Wheeler, G. H. Brookman, J. Hughes (*halves*); A. Caplan (capt.) A. R. Boney, R. G. Gilbert, D. Shackman, E. G. Darke (*forwards*).

BOXING CLUB.

On Tuesday, March 26th, at the N.S.C., Bart.'s won the Hospital Boxing Cup for the third time. The Hospital was well represented at the ringside, two-shilling and gallery seats.

German measles and "flu" removed three of our team at the last minute. We were lucky to get the services of E. G. C. Darke, who, on three days' notice, and in spite of his duties as Casualty H.P., managed to work off 6 lb. and make the light-weight limit.

J. French, displaying unsuspected ferocity in one so mild in appearance, knocked out his man in the first round of the semi-finals of the flyweights. Only the referee's interference saved his opponent in the finals from a similar fate also in the first round.

We had no entries in the bantam and featherweights, as both our representatives, Jackson and Telfer, were victims of German measles.

In the light weights E. G. Darke, substituting for W. H. D. Trubshaw, displayed great coolness and skill. Effectively keeping his opponents at arms' length in both his fights, he boxed his way to a well-deserved win in this weight.

G. F. Petty in the welter weights was unlucky to meet as good a man as Matthews of Middlesex in the first round. Matthews is a really good man and hits hard with both hands. Petty took a lot of punishment, but was unable to land a really effective punch, and lost a very game fight on points.

A. T. Blair, in the middle-weight finals, fought the fastest and prettiest fight of the evening with Fowler, of Thomas's. Both men displayed speed and skill above the usual standard at these shows. Blair won fairly handsomely on points.

In the finals of the light-heavyweights G. C. Knight met an experienced and clever boxer in Hodges, of Thomas's.

Knight, attacking vigorously from the start, piled up points, but connecting with a lucky one on his jaw was knocked out half way through the first round.

In the heavy weights P. J. Richards brought off his third successive win in the Hospitals boxing. With the aid of a useful straight he won the semi-final easily on points. In the final, giving away nearly a stone, and appearing very tired in the last two rounds, he gave us some moments of anxiety, but eventually won on a good margin of points.

Final results: Bart.'s first, 4 wins, 1 runner up and 1 entry, 19 points; St. Thomas's second with 15 points; London third with 9 points. Bart.'s, Guy's and St. Thomas's have now won the Cup three times, and London have had it once.

HOCKEY.

Final Inter-Hospital Hockey Championship.

ST. BARTHOLOMEW'S HOSPITAL *v.* UNIVERSITY COLLEGE HOSPITAL.

March 21st, at Richmond. There was quite a large and enthusiastic crowd, which unfortunately witnessed U.C.H. win by 1 goal to *nil*.

In the first half play was slightly in our favour—in fact only brilliant saving by their goalkeeper and on one occasion by their left back prevented us from opening the score. Their forwards were fast and clever, and always looked dangerous near the circle. At half-time there was no score.

After the change of ends U.C.H. were pressing heavily. Our forwards fell away somewhat against a safe and steady defence. Their forwards were combining better and Hodgkinson was called upon to clear with lusty boot. Five minutes from the end their outside right sent in a rasper, which found the far corner of the goal. Although we attacked for the remaining time we failed to score.

U.C.H. deserved to win, and we think it is the first time they have won the Cup. They were certainly the better balanced side.

The team has had an excellent season, having played 25 matches, won 19, drawn 3, lost 3.

This result has been brought about by the keenness shown by the members and their regularity in turning out. Let us wish them better luck next season.

Team.—H. L. Hodgkinson (*goal*); F. C. H. White, P. M. Wright (*backs*); M. Fordham, W. F. Church, K. W. D. Hartley (*halves*); E. J. Neill, F. H. McCay, C. Hay Shunker, J. W. C. Symonds, A. G. Williams (*forwards*).

REVIEWS.

DISEASES OF CHILDREN. Edited by GARROD, BATTEN and THURSFIELD. Second edition, edited by HUGH THURSFIELD, D.M., F.R.C.P., and DONALD PATERSON, M.B., M.R.C.P. (London: Edward Arnold, 1929.) Pp. 1106. 207 illustrations. Price 45*s.* net.

A cat may look at a king. Similarly, one may review a book which represents the accumulated experience of some forty experts. Whether, in either case, the resulting observations have any value is another matter. Here is a book on the diseases of children to which those of the English school who are best qualified have contributed, writing on matters in which they are especially interested. It conveys very completely the English opinion and teaching on the subject. Beyond this, it is unnecessary to say much about the quality of the information it contains, and comment may be confined to the other attributes which one looks for in a book.

A second edition of "Garrod, Batten and Thursfield" was to be anticipated with some misgivings. The original book had a certain charm and style which, one felt, would be lost in the revising. A sentence in the introduction to this edition was reassuring: "It is hard to re-clothe in other language a subject once satisfactorily treated, without losing freshness." One's fears were completely dispelled by reading the book itself. There are twenty-three new contributors. Every section has been brought up to date. Some have been added to, others partly, and some wholly, re-written. Yet the qualities which were so attractive in the older book have somehow been retained. The general arrangement of the work is the same. A chapter on diseases of the eye has been added. It would be interesting to know what arguments led to the section on the feeding of infants and children being elevated—or degraded—from the prolegomena to the chapters. One regrets that a section on the physiology of infancy was not added to the new edition to deal more particularly with those matters in which an infant differs from an adult, the early blood changes, the special nutritional requirements for growth and so forth. The questions are to a large extent discussed in one place and another in the appropriate chapters, but if they were grouped together under one heading, a more complete picture of the mechanisms peculiar to babyhood would be given. Apart from this, the book covers the ground very thoroughly. The material is presented in a concise way, without too much dallying with rival opinions and hypotheses. Consequently the tedium which attends the close examination of every point of view is obviated. In spite of its many contributors, the book escapes a drawback which is shared by so many of those of composite authorship, namely, reiteration. There is no overlapping or covering the same ground twice. The sequence of the argument runs almost as if it proceeded from a single pen. For this achievement the editors cannot be too highly congratulated.

There are other qualities which contribute to one's comfort in reading a book. The print is good and the margins sufficiently wide. The matter of margins is of greater importance than would appear at first sight. If they are narrow and the book be opened towards its middle part, the lines of print disappear down into a deep ravine, which can be explored only by breaking the back of the book. Many people prefer to leave such a volume unread. Considering its scope, this book is extraordinarily concise. There are, in fact, a hundred pages fewer in this edition than in the last. It is possible that this shortening is more apparent than real, because the make-up of the book seems to have been altered slightly. The illustrations have been changed and added to, and interest considerably enhanced thereby. Reproductions of skiagrams are sometimes referred to by that title and sometimes are called radiograms. During the last few years an additional and quite different meaning has become attached to the term "radiogram"; it would seem better to abandon it in its medical significance. The pettiness of such criticisms may be taken as a measure of the general excellence of the book.

Among the books on diseases of children which are appearing in increasing numbers this work holds a place entirely its own. The first edition maintained its supremacy for fifteen years. Its successor is worthy of it.

LECTURES TO NURSES. By MARGARET S. RIDDELL, A.R.R.C., S.R.N. Third edition, enlarged. (Faber & Gwyer, 1928.) Pp. 518. Illustrated. Price 6*s.* net.

Nurses are expected to know so much apart from their nursing proper, and are given so little opportunity for really learning additional subjects like anatomy and physiology, that it must be a difficult task to write a book for them.

This book, already in its third edition, can safely be recommended. The authoress was certificated at St. Bartholomew's Hospital, and has had much experience.

The parts on nursing are admirable, and the nurse who knows—and practises—the advice given will be good indeed.

We may be forgiven for making a few criticisms. No mention is made of counting the apex-beat with the stethoscope while a second observer counts the pulse, for the purpose of knowing the number of feeble heart-beats which do not reach the wrist. This useful information can readily be obtained by any nurse.

With regard to the preparation of patients for operation, we would like to add a note that there are many surgeons who do not give castor oil as a routine. Indeed, to some patients the discomfort caused by this drug is far greater than that of the operation.

The modern treatment of diabetes is not "to starve the patient for three to five days!" Adrenalin should be mentioned in the treatment of hypoglycæmia when sugar cannot be swallowed.

But these are small points in an otherwise excellent book.

ELEMENTS OF SURGICAL DIAGNOSIS. By ERIC PEARCE GOULD, F.R.C.S. Seventh edition. (Cassell & Co., 1928.) Pp. 730. Price 12*s.* 6*d.* net.

This at first looks a small volume until one realizes that there are over 700 pages, and that a very great amount of excellent practical information is packed into it.

Ordinary surgical text-books take diseases as the headings and put the signs and symptoms on to them; this book works in the opposite direction and takes different signs and symptoms as the headings, and then follows through to the different diseases. This is extremely useful for the student and for the practitioner when dealing with a difficult or rare condition.

Cholecystography and the use of lipiodol in diagnosis are fully described in this edition. The skiagrams are good on the whole, though a few are hardly up to standard. Most of the old terms have been eradicated, but such terms as "onychia maligna" and "sloughing phagedænic chancre" are confusing rather than useful. This book, as always throughout its many editions, occupies a position quite alone in its sound practical arrangement and with its wealth of useful information both for the student and for the qualified man.

RECENT BOOKS AND PAPERS BY ST. BARTHOLOMEW'S MEN.

ABERNETHY, D. A., B.M., B.Ch.(Oxon.), F.R.C.S.(Edin.). "Torsion and Strangulation of a Hydatid of Morgagni." *British Medical Journal*, January 26th, 1929.

BARRIS, J., M.B., F.R.C.P., F.R.C.S. and SHAW, WILFRED, F.R.C.S. "Rhabdomyosarcoma of the Ovary." *Proceedings of the Royal Society of Medicine*, January, 1929.

CHRISTOPHERSON, J. B., C.B.E., M.D., F.R.C.P. "A National Outlook on Tropical Medicine." Presidential Address to Section of Tropical Diseases and Parasitology of the Royal Society of Medicine." *Proceedings of the Royal Society of Medicine*, December, 1928.

CLARK, W. E. LE GROS, D.Sc., F.R.C.S. "The Thalamus of Tupaia Minor." *Journal of Anatomy*, January, 1929.

COCHRANE, R. G., M.D., M.R.C.P., D.T.M.&H. "Treatment in Leprosy." *Leprosy Notes*, January, 1929.

CORSI, H., F.R.C.S. "Punctate Melanodermia." *Proceedings of the Royal Society of Medicine*, December, 1928.

COYTE, RALPH, M.B., B.S., F.R.C.S. (L. R. BROSTER, D.M., M.Ch. [Oxon.], and R. C.). "Torsion of the Appendix of the Testis (Hydatid of Morgagni)." *British Medical Journal*, January 26th, 1929.

DAVIES, J. H. TWISTON, M.B. "Lymphangioma Circumscriptum." *Proceedings of the Royal Society of Medicine*, January, 1929.

——— "Chronic Circinate Eruption." *Proceedings of the Royal Society of Medicine*, January, 1929.

EVANS, GEOFFREY, M.D., F.R.C.P. "Essential Constipation." *Clinical Journal*, February 20th, 1929.

FREMANTLE, F. E., O.B.E., M.P., M.D., F.R.C.P., F.R.C.S., D.P.H. "The Authority of Parliament in Relation to Epidemic Disease." *Medical Officer*, February 2nd and 9th, 1929.

GASK, GEORGE E., C.M.G., D.S.O., F.R.C.S. "Radium in the Treatment of Malignant Disease." *British Medical Journal*, February 9th, 1929.

GORDON-WATSON, Sir CHARLES, K.B.E., C.M.G., F.R.C.S. "Specimen of Carcinoma of Ascending Colon with Great Dilatation of Cæcum: Removed by Resection of the Distal Half of the Colon after Preliminary Short Circuit." *Proceedings of the Royal Society of Medicine*, December, 1928.

GRAHAM, GEORGE, M.A., M.D., F.R.C.P. "The Interpretation of Blood-Sugar Estimations." *Lancet*, January 26th, 1929.

HALDIN-DAVIS, H., M.D., F.R.C.S. "Four Cases of Lupus Erythematosus Treated with Gold Preparations." *Proceedings of the Royal Society of Medicine*, December, 1928.

——— "Lichen Plano-pilaris." *Proceedings of the Royal Society of Medicine*, December, 1928.

EXAMINATIONS, ETC.

University of Cambridge.

The following degrees have been conferred:

M.B.—Holmes, E. G., Recordon, E. G.

B.Chir.—Maclay, W. S., Palmer, E. A. E., Sinclair, M. R.

M.B., B.Chir.—Barendt, G. H., James, E. T., Lloyd, W. J., Mellor, A. W. C., Pimblett, G. W., Preece, T. M., Slinger, L. A. P., Underwood, W. E.

University of London.

Second Examination for Medical Degrees, March, 1929.

Part I.—Ashton, D. R., Davies, D. O., Davies, H. H., Dipple, P. E., Gale, H. E. D., Harris, R. V., McOwan, B. M., Norsworthy, L. R., Shackman, R., Sutton, R. J. C., Telfer, W. P. McK., Thomson, D. M., Ware, C. E. M., Weddell, A. G. McD.

Part II.—Blumovitch, H., Bryer, M., Churchill, M. H., Dexter, L., Freeman, L., Gilbert, R. G., Hayward, S. T., Keele, K. D., Knight, G. C., Knox, R., Scowen, E. F., Strong, J. R., West, J. H., Williams, H. M., Winslow, V. F. F.

Conjoint Examination Board.

Pre-Medical Examination, April, 1929.

Chemistry and Physics.—Croft, F., Dias, N. J., de Freitas, A J. S.

Chemistry.—Horton, H. E. N., Jenkins, J. R. R., Noordin, R. M., Smallhorn, T.

First Examination, April, 1929.

Part I. Anatomy and Physiology.—Brookman, G. H., Hole, E. K., Jackson, J. M., Roberts, P. G., Savage, O. A., Thomas, J. C. S.

Anatomy.—Dodson, E. E., Orpwood, R. M. M. C., Oxley, W. P. M., Powell, J. D., Woods, T. G. R.

Physiology.—Cutlack, A. R., Symonds, J. W. C.

Part II. Materia Medica and Pharmacology.—Bamford, J. B., Davies, T., Edelsten, G. G. M., Heathcote, A. A., Mandelstam, M., Rowe, J. T., Spaight, P. Q. M., Thomas, J. C. S., Williams, R. N. H.

CHANGES OF ADDRESS.

BATTERHAM, Capt. D. J., R.A.M.C., Keyberry House, Forde Park, Newton Abbot.

EVANS, F. T., Gordon House, 37, Welbeck Street, W. 1. (Tel. Welbeck 2846.)

GILLON, G. GORE, "Waihola," Oakdale, Poole, Dorset.

HALL, P., 100, Gloucester Place, Portman Square, W. 1. (Tel. Welbeck 3373.)

LADELL, E. W. J., Elliot, Cape Province, South Africa.

MIDELTON, W. J., 12, Charminster Road, Bournemouth.

RAWKINS, M. D., Kingswood, Cross Deep, Twickenham. (Tel. Popesgrove 2527.)

CHANGES OF TELEPHONE NUMBER.

DONALDSON, M. (Tel. Langham 3648.)

GILLIES, H. D. (Tel. Welbeck 2211.)

ROXBURGH, A. C. (Tel. Welbeck 6818 and 6819.)

APPOINTMENT.

DALE, W. CHALMERS, M.B., B.S.(Lond.), appointed Medical Officer to the Government Training College, Ibadan, Nigeria.

BIRTHS.

DRIVER.—On April 18th, 1929, at Tregea House, Penzance, to Phyllis (*née* Pettit), wife of George P. Driver, M.R.C.S., L.R.C.P.—a daughter.

GOUGH.—On March 19th, 1929, at Highfield, Northwich, Cheshire, to Kathleen, wife of E. P. Gough, B.A., M.R.C.S., L.R.C.P.—a son (John Noël).

GRIFFITHS.—On April 1st, 1929, at Farfield House, Kidderminster, to Audrey (*née* Mennell), wife of P. Digby Griffiths, M.B.(Cantab.)—a second daughter.

HAYES.—On April 15th, 1929, at The Hermitage, Potters Bar, to Hilda (*née* Broughton), wife of Dr. W. E. Hayes—a son.

HOLDEN TINCKER.—On April 17th, 1929, at Painswick, Glos., to Kathleen (*née* Bates), wife of Surg.-Lieut. R. W. Holden Tincker, R.N.V.R.—a daughter.

HUBBLE.—On March 23rd, 1929, at Derby, to Joan, wife of Douglas Hubble, M.B., B.S., of 105, Kedleston Road, Derby—a daughter.

MAITLAND.—On April 12th, 1929, at Golders Green, to Joyce (*née* Knight), wife of Charles Titterton Maitland—a daughter.

PAYNE.—On April 16th, 1929, to Isabella Margaret (*née* Abbott), wife of Reginald T. Payne, F.R.C.S., of Abbey Court, St. John's Wood—a son.

MARRIAGES.

BUCHLER—WISELMAN.—On April 14th, 1929, at St. John's Wood Synagogue, by the Rev. Price and Rev. Prince, Dr. Eric Buchler, second son of Prof. Dr. A. Buchler, to Clara Wiselman, of Ebbw Vale, Wales.

LEHMANN—ELFORD.—On April 4th, 1929, at Christ Church, Radlett, by Rev. T. F. Yule, uncle of the bride, assisted by Rev. G. Gurney Richards, Dr. Harold Paul Lehmann, of Wickham Market, Suffolk, elder son of Mr. and Mrs. S. P. Lehmann, of Woodford Green, to Margaret Mary Elford, younger daughter of Mr. and Mrs. S. Elford, of Radlett.

MOSSE—THEW.—On January 24th, 1929, at St. Mary's Church, Hunstanton, Bardwell Ebden Tenison Mosse, younger son of Mr. and Mrs. Tenison Mosse, of Bristol, to Joan Alice, only daughter of Mr. and Mrs. Frank Sherwood Thew, of King's Lynn.

DEATHS.

BOWLBY.—On April 7th, 1929, at Stoney Cross, near Lyndhurst, Sir Anthony Alfred Bowlby, Bart., D.C.L., K.C.B., K.C.M.G., K.C.V.O., F.R.C.S., only surviving son of the late Thomas William Bowlby, aged 73.

CUMBERBATCH.—On March 23rd, 1929, at Great Sarratt Hall, near Rickmansworth, from pneumonia, Alphonso Elkin Cumberbatch, M.B., F.R.C.S., aged 81.

GRANVILLE.—On March 23rd, 1929, at 34, Halsey Street, Chelsea, Alexander Granville Pasha, C.M.G., C.B.E.

LEE.—On April 27th, 1929, died instantly in an accident, Edward Sidney Thomas Lee, elder son of Dr. and Mrs. W. E. Lee, 17, Princes Avenue, Muswell Hill, N. 10.

VAISEY.—On April 2nd, 1929, at Combe Down, Bath, Thomas Frederick Vaisey, M.R.C.S.E., L.R.C.P., late of Winslow, Bucks.

WALLIS.—On April 1st, 1929, at a nursing home in Hove, Robert Lauder Mackenzie Wallis, M.D., of 106, Harley Street, W. 1, aged 43.

WHITE.—On March 29th, 1929, Edward Augustine White, M.B., B.S., M.R.C.S., L.R.C.P.(Lond.), only son of Dr. T. E. White, Catford, S.E., aged 25.

NOTICE.

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